

SUMMARY
ROUTE CONCEPT REPORT
ROUTE 236
SCR PM 0.00 to 17.72

AUG 19 1985

This report defines the concept for improvement of Route 236 in District 4 for a 20-year planning period. (1985-2005)

ROUTE CONCEPT

Segment A: Jct Rte 9 south to Governors Camp PM SCR 0.00 to 9.32
2-Lane Conventional C-35

Segment B: Governors Camp to Jct Rte 9 north PM SCR 9.32 to 17.72
2-Lane Conventional B-45

CONCEPT RATIONALE

Route 236 is primarily used as a access to Big Basin Redwoods State Park. This route is the only major road leading into the park.

ROUTE DESCRIPTION

Route 236 is approximately 18 miles long. The entire route is located within Santa Cruz County, and the beautiful Santa Cruz Mountains. Route 236 is utilized as a recreational access to Big Basin Redwoods State Park. The section from the Route 236 south/Route 9 junction to China Grade Road receives significant residential traffic. This route is in the state scenic highway system.

The legislative description is as follows:

"Route 236 is from Route 9 near Boulder Creek to Route 9 near Waterman Gap, via Governors Camp in Big Basin Redwoods State Park."

AREAS OF CONCERN

This 2-lane conventional road has short radius curves, steep embankments and no shoulders or pull out areas. Due to heavy winter storms (1981-1983), the route has received damage from mud slides, flooding and embankment erosion.

PROBLEM LOCATION AREAS

PM 0.0 to 2.5 Roadway in poor condition
PM 3.7 to 17.0 Roadway in poor condition

IMPROVEMENTS

A 1.2 million dollar roadway rehabilitation project is proposed for the 1985/86 F.Y. from Jamison Creek Road to Governors Camp (P.M. 2.7 to 9.3).


ROUTE CONCEPT REPORT

ROUTE 236


SCr 0.00 to SCr 17.72

Prepared under the direction of:

Recommended Approval:

 8/19/85

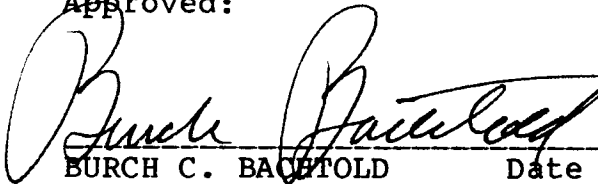
CECIL L. SMITH, Chief Date
Transportation Planning
District 4

 8-20-85

JOHN VOSTREZ Date
Deputy District Director
Planning and Programming


I approve this Route Concept Report as the guide toward which today's decisions and/or recommendations should be directed.

Approved:

 8/21/85

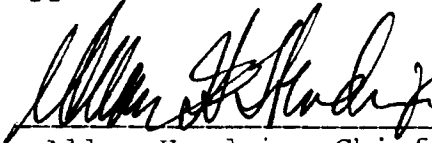
BURCH C. BAERTOLD Date
District Director of
Transportation

Approved:

 10-16-85

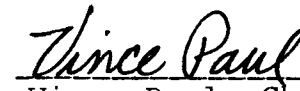
D. L. WIEMAN, Chief Date
Division of Transportation
Planning

Approved:

 8/31/87

Allan Hendrix, Chief Date
Division of Highways and
Programming

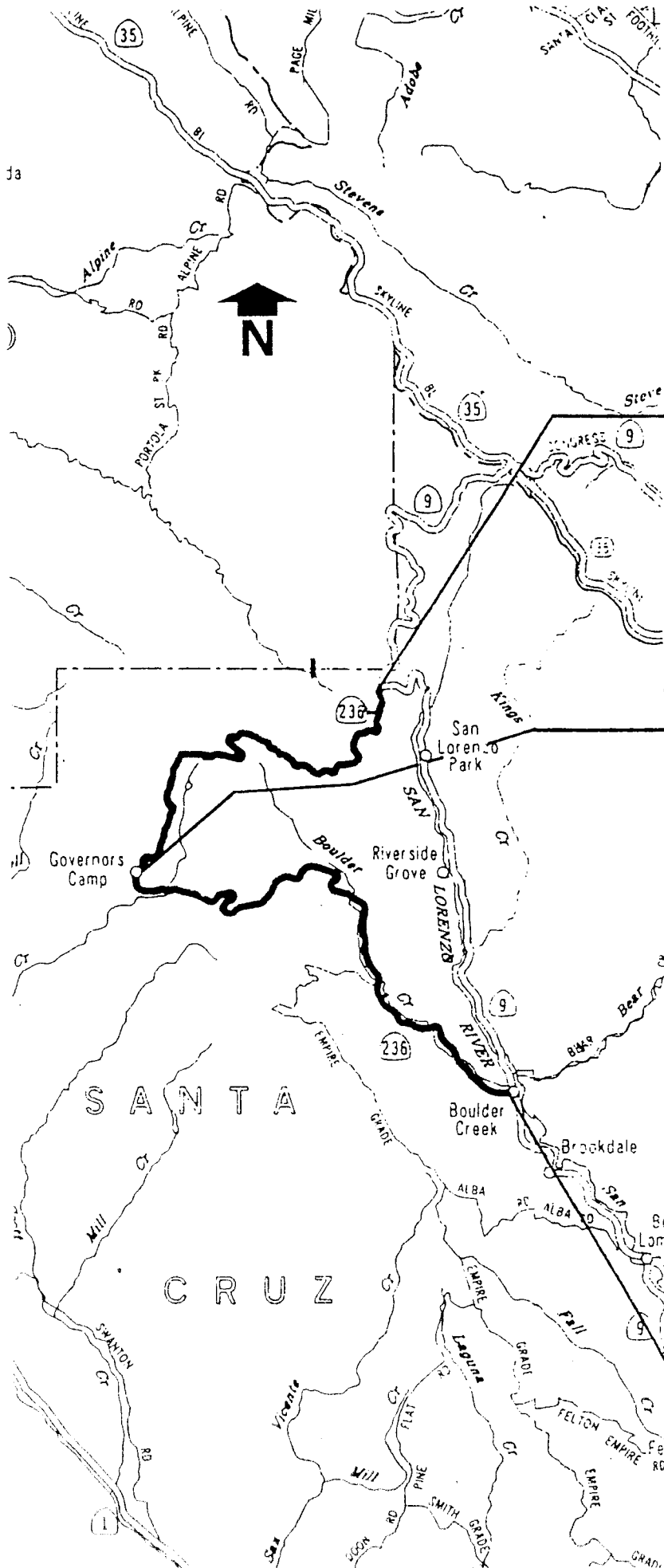
Approved:

 11/17/86

Vince Paul, Chief Date
Division of Project
Development

LOCATION MAP

Route 236



B

SCR 17.72

A

SCR 9.32

SCR 0.0

Purpose of the Route

Route 236 is primarily a recreational route for campers travelling to Big Basin Redwoods State Park.

Project Report

Caltrans has recently completed a roadway rehabilitation project report on Route 236. The project limits were from Jamison Creek Road to Governors Camp in Big Basin State Park (P.M. 2.7 to 9.3).

The proposed work includes excavation of localized failed areas and backfilling with AC, cleaning and sealing cracks, relining or replacing damaged culverts as necessary, overlaying existing roadway with AC and replacing guardrails to meet current Caltrans standards. The current estimated cost of construction is 1.2 million dollars. The proposed construction year is 1985/86 F.Y.

Segment A: Jct Rte 9 south to Governors Camp (SCR PM 0.00 to 9.32)

This segment begins at the junction of Route 9 south near Boulder Creek and ends at Governors Camp. The route is a 2-lane conventional highway with no shoulders. The terrain is rolling to mountainous with a 3% to <6% grade.

During the summer weekends congestion occurs at the Route 236 south and Route 9 junction; in the community of Boulder Creek.

At the present time the Santa Cruz Metropolitan Transit District operates two bus routes along Route 236, routes 35 and 37.

The 1982 AADT ranges from 6,000 at the junction of Route 9 south to 900 at Governors Camp. The northbound AM peak hour volumes range from 600 to 200, the southbound AM peak hour volumes range from 400 to 100. The V/C ratio is .48 with a level of service B-45.

The 1995 (2005) AADT ranges from 7,000 (8,000) at the junction of Route 9 south to 2,000 (3,000) at Governors Camp. The AM peak hour volume for 1995 in the northbound direction range from 600 to 200, the southbound AM volumes range from 420 to 300. The D/C ratio for the year 1995 is .54 with a level of service B-40, the D/C ratio for the year 2005 is .60 with a LOS of C-35.

From the period of January 1, 1981 to December 31, 1983 there were a total of 116 accidents. There were 99 people injured and 3 fatalities. The accident rate is 4.79 accidents per MVM, the state wide average is 3.26 accidents per MVM. The fatality rate for this segment is .104 accidents per MVM, the statewide average is .092 accidents per MVM.

There are two roadway reconstruction projects programmed into the 1984 STIP. One of the projects is from the junction of Route 9 south to Ridge Drive (PM 0.0 to 1.4), the other reconstruction project is from north of Jamison Creek to Governors Camp (PM 3.0 to 9.3).

The route concept is to maintain the present 2-lane facility with no improvements.

Segment B: Governors Camp to Jct Rte 9 north (SCR PM 9.32 to 17.72)

This segment runs from Governors Camp to the junction of Route 9 north. There are 2-lanes in each direction and no shoulders. This segment of Route 236 is entirely on state park land.

The only transit service available is the Santa Cruz Metropolitan Transit District route 37 which goes as far as the state park.

The 1982 AADT volumes for this segment ranges from 800 at the junction of Route 9 north to 700 north of Governors Camp. The northbound AM peak hour volume is 100, the southbound AM peak hour volumes range from 80 to 70. The V/C ratio is .12 with a level of service A-50.

The AADT for 1995 ranges from 1,500 at the junction of route 9 north to 1,400 north of Governors Camp. The northbound AM peak hour volumes for 1995 range from 200 to 100, the southbound AM peak hour volumes range from 170 to 120 vehicles.

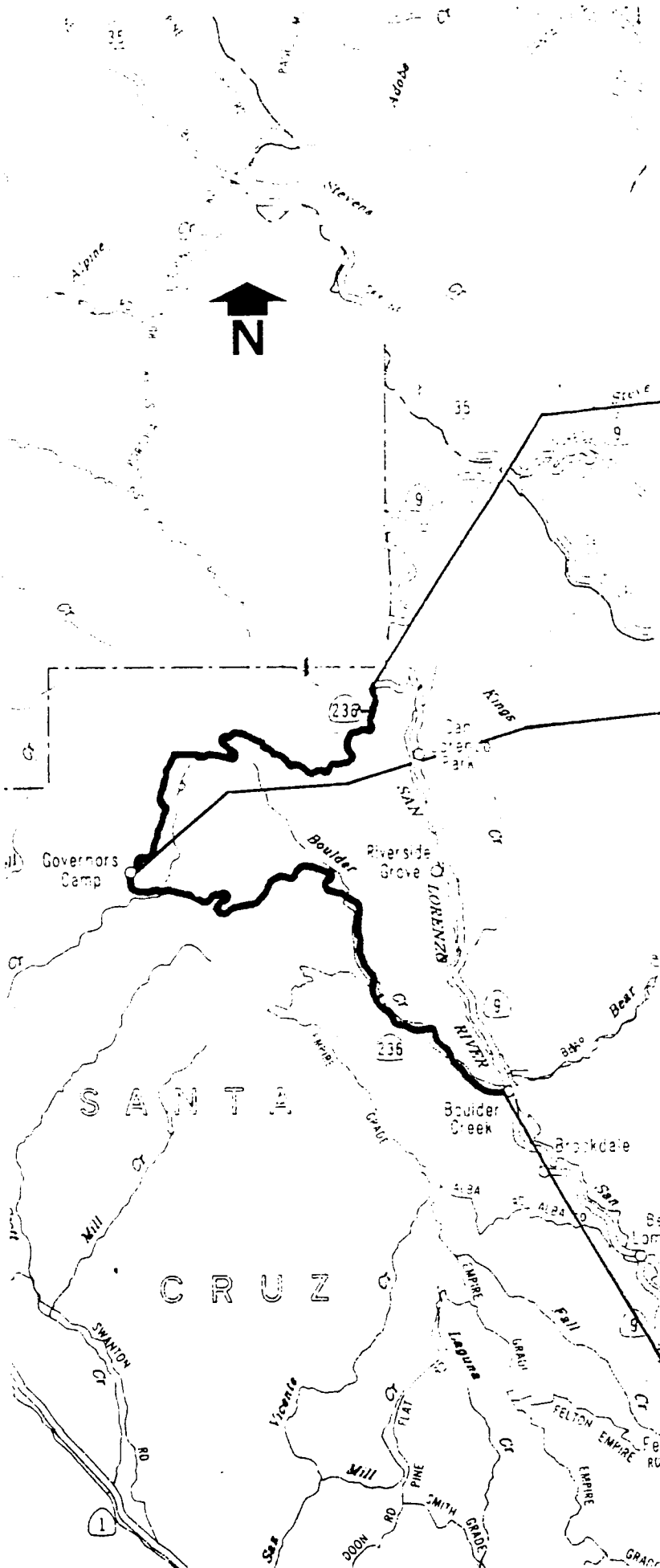
The 2005 AADT for this segment ranges from 2,000 at the junction of Route 9 north to 1,800 at Governors Camp. The northbound AM peak hour volumes for 2005 range from 170 to 120 vehicles, the southbound AM peak hour volume ranges from 250 to 190 vehicles.

The 1995 V/C ratio is .18 with a level of service A-50. The 2005 V/C ratio is .20 with a LOS of B-45.

A total of 10 accidents occurred on this segment from December 31, 1981 to January 1, 1983. There were 10 people injured and no deaths. The total accident rate is 2.29 accidents per MVM, the statewide average is 4.16 accidents per MVM. The fatality rate is .000 accidents per MVM, the statewide average is .102 accidents per MVM.

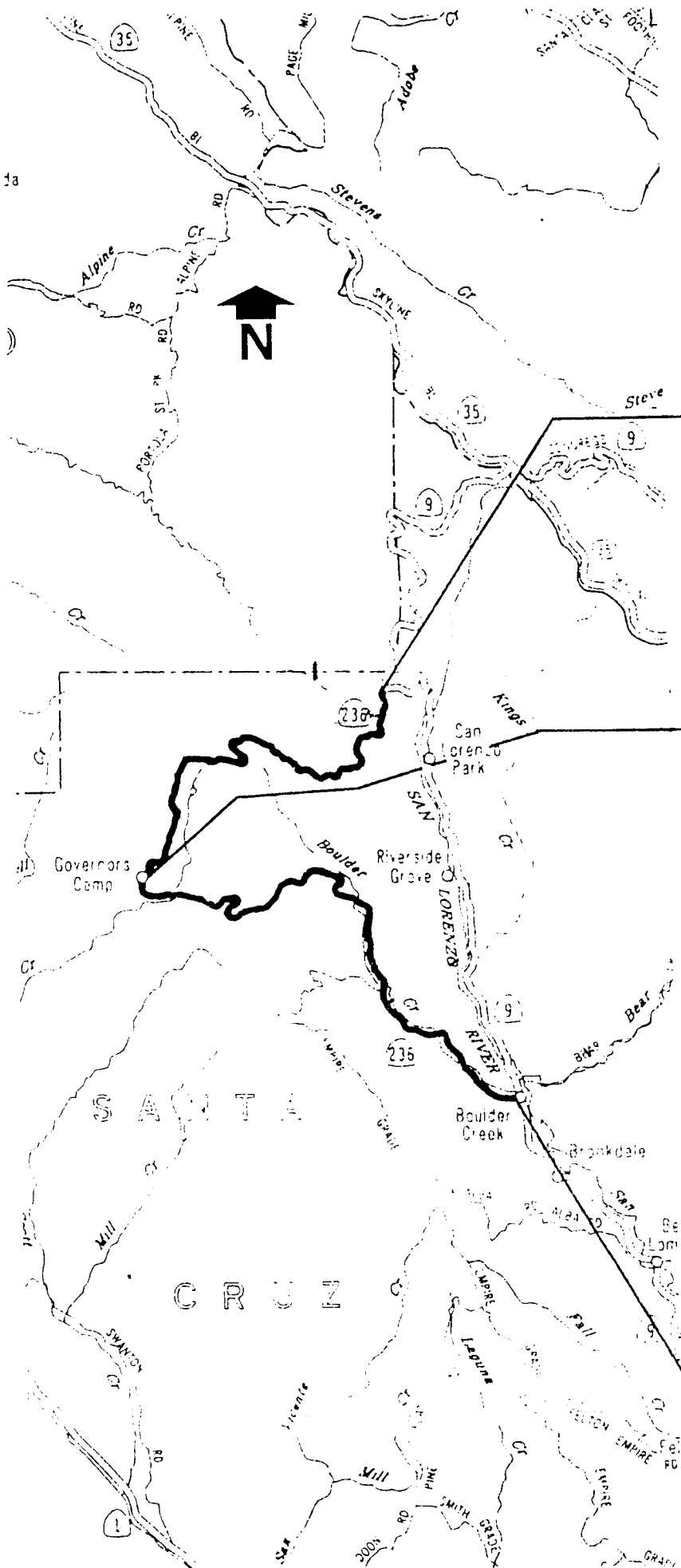
The route concept is to maintain the present 2-lane facility throughout the entire segment with no improvements.

EXHIBIT A



SEGMENT		SCR 0.0	A		SCR 9.32	B		SCR 17.72
NO. OF LANE PROPOSED	PRESENT		2			2		
	1995		2			2		
	2005		2			2		
LEVEL OF SERVICE PROPOSED	PRESENT		B-45			A-50		
	1995		B-40			A-50		
	2005		C-35			A-45		
TERRAIN			Rolling to Mountainous			Mountainous		
GRADES			0-6%			0-6%		
Accidents Per MVM			4.79			2.29		
Fatalities Per MVM			0.104			.000		

EXHIBIT B



SEGMENT		SCR 0.0	A	SCR 9.32	B	SCR 17.72
A.A.D.T. (000)	1982		2-6		.7	.9
	1995		4-7		1.4	2
	2005		4-8		2	3
A.V.H.P. (00)	1982		6		1	
	1995		7		2	
	2005		8		2.3	
AVE. HWY SPEED			45		45	
OPERATING SPEED			29		42	
V/C	1982		.48		.12	
	1995		.54		.18	
	2005		.60		.20	
YEAR CAPACITY AND BE KNOTS						

EXPLANATION TO TRAFFIC VOLUME TABLES

<u>COLUMN</u>	<u>DESCRIPTION</u>
SEGMENT	Description of the Route Segment
CO	County Abbreviations
MILE POST	Mile Post in County
DESCRIPTION	Description of the Route Segment
AADT	Annual Average Daily Traffic Count
AM PK	Morning Peak Hour Traffic
AH	Volumes Ahead Direction
BK	Volumes Back Direction
NO L	Number of Lanes (Existing) One Direction
V/C	Volume/Capacity: Ratio Volume Traffic to Max. No. of Traffic/Hr.
LOS	Level of Service According to the Functional Classification of the Route Relative to the Terrain and Facility
LN	Number of Lanes Needed to Meet LOS "D" One Direction
% TRUCK AADT	Truck % of Average Annual Daily Traffic Count
% TRUCK PK HR	Truck % at Peak Hour

ROUTE 236 TRAFFIC TABLE

S CO	POST	TRUCK%	1982	L	1985	L	2005	L
E	MILE	AA PK	AA AM-PK	NO V/C	O NO CAP	AA DT	AM-PK AH BK L	NO D/C O NO
G		DT HR	DT AH BK L	S LN	S LN	DT AH BK L	AM-PK AH BK L	D/C O NO S LN
A SCR	0.00		JCT RTE 9 SOUTH					
		4 3	6 6	4 1 .49 B	1 1200	7 6 4.2	1 54 B	1 8 7 5 1 .60 C 2
A SCR	2.67		JAMISON CREEK ROAD					
		3 2	5 3	1 .38 A	1 1200	4 5 3	1 .42 B	1 5 6 4 1 .47 B 1
A SCR	8.74		STATE PARK					
		2 2	.9 2	1 1 .14 A	1 1200	2 2 3	1 .17 A	1 3 2.2 1.4 1 .20 A 1
B SCR	9.32		GOVERNORS CAMP					
		1 1	.7 1	.8 1 .10 A	1 1200	1.4 2 2.2	1 .19 A	1 1.8 1.7 2.5 1 .21 A 1
B SCR	12.72		STATE PARK					
		1 1	.8 1	.7 1 .12 A	1 1200	1.5 1 1.6	1 .18 A	1 2 1.2 1.9 1 .19 A 1
B SCR	17.72		JCT RTE 9 NORTH					

This chart indicates the relationship between Level of Service and minimum operating speed for a given facility type.

<u>Assigned Level of Service</u>	<u>Facility Type</u>	<u>Minimum Operating Speed</u>
B	Freeways, expressways, or multilane conventional highways	55 MPH
B	Two-lane conventional highways	50 MPH
C	Freeways or expressways	50 MPH
C	Multilane conventional highways	45 MPH
C-45	Two-lane conventional highways	45 MPH
C	Two-lane conventional highway	40 MPH
D	Freeway or expressways	40 MPH
D	Conventional Highways	35 MPH
D	Conventional Highways with controlling traffic signals	15-30 MPH*

* This condition is shown on the tabulation of route segments under the "LOS" headings as D35.

Operating level of service on a roadway is a measure of the speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. A roadway designed for a certain level of service will actually operate at different levels throughout the day. The level of service on a roadway varies inversely as some function of the traffic volume.

COMPARISON OF FUTURE LOS WITH ROUTE CONCEPT

SEGMENT	NO. LANES/LOS			ROUTE CONCEPT		NEEDS	
	1982	1995	2005	Proposed Lanes	LOS	Lanes	Target LOS
A SCr 0.00 to 9.32	2/B-45	2/B-40	2/C-35	2	C-35	2	B-45
B SCr 9.32 to 17.72	2/A-50	2/A-50	2/B-45	2	B-35	2	B-45

STATEMENT OF PLANNING INTENT

The Route Concept Report (RCR) is a planning document which expresses the Department's judgment on what the characteristics of the state highway should be to respond to the projected travel demand over the 20-year planning period. The RCR contains the Department's goal for the development of each route in terms of level of service and broadly identifies the nature and extent of improvements needed to reach those goals. The RCR then provides the basis for the preparation of Route Development Plans (RDP) and the system analysis which indicates the level of service provided on the system at a given level of funding.

Route concept reports are prepared in the districts and represent the combined expertise of district staff. Facility dimensions (e.g., roadway widths or number of lanes on a multi-laned facility) discussed in the RCR represent an initial planning approach to scoping candidate improvements and determining estimated costs.

All information in the RCR is subject to change as conditions change and new information is obtained. Consequently, the nature and size of identified improvements may change as they move through the project development stages, with final determinations made at the time of project planning and design. If the nature and size of improvements change from that included in this report during later project development stages, this will be cause to review the RCR for this route.